

EPA/OPP MICROBIOLOGY LABORATORY
ESC, Ft. Meade, MD

Standard Operating Procedure
for
Monitoring Temperature/Humidity of the Sample Storage Room

SOP Number: QC-08-03

Date Revised: 07-12-05

Initiated By: _____ Date: ____/____/____

Print Name: _____

Technical Review: _____ Date: ____/____/____

Print Name: _____

Technical Staff

QA Review: _____ Date: ____/____/____

Print Name: _____

QA Officer

Approved By: _____ Date: ____/____/____

Print Name: _____

Branch Chief

Effective Date: ____/____/____

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1.0 <u>SCOPE AND APPLICATION:</u>	

1.1 This protocol describes the quality control requirements for recording the temperature/humidity of the sample storage room D204 and additional storage areas in B204

2.0 DEFINITIONS: None

3.0 HEALTH AND SAFETY: Not applicable

4.0 CAUTIONS: None

5.0 INTERFERENCES: None

6.0 PERSONNEL QUALIFICATIONS:

6.1 Personnel are required to be knowledgeable about the procedures in this SOP.

7.0 SPECIAL APPARATUS AND MATERIALS:

7.1 Fisher Traceable Big-Digit Hygrometer/Thermometer, serial number 21087790; manufacturer claims an accuracy of $\pm 1^{\circ}\text{C}$ for thermometer and $\pm 2\%$ RH (mid-range) or $\pm 4\%$ RH (outside mid-range).

7.2 Control Company Traceable Big-Digit Hygrometer/Thermometer, serial number 230046326; manufacturer claims an accuracy of $\pm 1^{\circ}\text{C}$ for thermometer and $\pm 2\%$ RH (mid-range) or $\pm 4\%$ RH (outside mid-range).

7.3 VWR Digital Humidity and Temperature Meter, serial number 230200219; manufacturer claims accuracy of $\pm 1^{\circ}\text{C}$ or F for thermometer and $\pm 2\%$ RH (mid-range) or $\pm 4\%$ RH (ends of range).

8.0 INSTRUMENT OR METHOD CALIBRATION:

8.1 The humidity and temperature meters (section 7.0) are calibrated against a NIST traceable thermometer on an annual basis by a company certified to perform such calibrations.

9.0 SAMPLE HANDLING AND STORAGE: Not applicable

10.0 PROCEDURE AND ANALYSIS:

10.1 The set point for the Environmental Science Center heating/cooling system is

68±2°F (20±1°C) in the winter and 70±2°F (21±1°C) in the summer. The temperature and relative humidity of sample storage room D204 and the sample storage area in room B204 (flammable storage cabinets) will be recorded once daily each working day (Monday through Friday excluding holidays and days when the ESC is closed for any reason) on the appropriate Temperature Record form (see 16.0). For the storage area (flammable storage cabinet) located in room B204, the temperature and humidity are taken from an area in close proximity to the sample storage cabinets.

- 10.2 On weekends, holidays and days when the ESC is closed, note the reason why the temperature is not recorded under “Maintenance and Notes” on the appropriate Temperature Record form (see 16.0).

11.0 DATA ANALYSIS/CALCULATIONS: None

12.0 DATA MANAGEMENT/RECORDS MANAGEMENT:

- 12.1 The temperature and relative humidity of sample storage areas (room D204 and the sample storage area in room B204) are to be recorded promptly, legibly and in indelible ink on the Sample Storage Room Temperature/Humidity Record Form (see 16.1). Completed forms are archived on a yearly basis in notebooks kept in secured file cabinets in the file room D217. Archived data is subject to OPP's official retention schedule contained in SOP ADM-03, Records and Archives.

13.0 QUALITY CONTROL:

- 13.1 For quality control purposes, the required information is documented on the appropriate forms (see 16.1).
- 13.2 The digital temperature/ humidity meters are calibrated annually against NIST traceable thermometers by an ISO 9001 certified company. The calibration certificates of humidity/temperature meters are maintained in a notebook archived in the laboratory's file room D217.

14.0 NONCONFORMANCE AND CORRECTIVE ACTION:

- 14.1 If the temperature of the sample storage room or area is not within the target temperature range (20±5°C), building authorities will be contacted to initiate adjustments/repairs to the air supply system.
- 14.2 If the temperature of the sample storage room or area deviates significantly from target temperature range for an extended period, Office of Enforcement and

Compliance Assurance (OECA) will be contacted for advice on sample retention/disposal.

15.0 REFERENCES: None

16.0 FORMS AND DATA SHEETS:

16.1 Sample Storage Room Temperature/Humidity Record Form.

Sample Storage Room Temperature/Humidity Record Form OPP Microbiology Laboratory

Month/Year: ____/____		Target Temperature: 20±5°C		
Room #: ____		Thermometer ID/Correction Factor: ____/____°C		
Day	Time/Initials	Temperature	Humidity	Notes /Comments
1				
2				
3				
4				
5				
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7				
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11				
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